

17. (Twice Amended) An ELISA kit comprising human cartilage oligomeric matrix protein prepared by the method comprising:

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- a) introducing DNA encoding human cartilage oligomeric matrix protein into cells, thereby producing cells expressing human cartilage oligomeric matrix protein;
 - b) culturing the cells in a culture medium under conditions suitable for expressing the human cartilage oligomeric matrix protein, thereby producing expressed human cartilage oligomeric matrix protein; and
 - c) purifying the human cartilage oligomeric matrix protein in the presence of calcium.

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19. (Three Times Amended) An ELISA kit comprising the human cartilage oligomeric matrix protein (hCOMP) produced by the method comprising:

- a) obtaining DNA encoding full length hCOMP;
- b) introducing the DNA into cells, thereby producing cells expressing hCOMP;
- c) culturing the cells in a culture medium under conditions suitable for expressing the hCOMP, thereby producing expressed hCOMP; and
- d) purifying the hCOMP in the presence of calcium.

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37. (Three Times Amended) A composition comprising purified cartilage oligomeric matrix protein in calcium-replete conformation, and further comprising a biological matrix, wherein the matrix comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers, porous polylactic acid, type I collagen gel, and type II collagen gel.

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38. (Amended) A composition comprising purified cartilage oligomeric matrix protein and a biological matrix, wherein the matrix comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers, porous polylactic acid, type I collagen gel, and type II collagen gel, and further comprising chondrocytes or mesenchymal stem cells.

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39. (Twice Amended) A composition comprising purified cartilage oligomeric matrix protein and a biological matrix, wherein the matrix comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers, porous polylactic acid, type I collagen gel, and type II collagen gel, wherein the cartilage oligomeric matrix protein is bound to a differentiation agent.
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40. (Amended) A composition comprising purified cartilage oligomeric matrix protein and a biological matrix, wherein the matrix comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers, porous polylactic acid, type I collagen gel, and type II collagen gel and further comprising chondroitin sulfate proteoglycans.
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41. (Twice Amended) A composition comprising purified cartilage oligomeric matrix protein and a biological matrix, wherein the matrix comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers, porous polylactic acid, type I collagen gel, and type II collagen gel, wherein the cartilage oligomeric matrix protein is human cartilage oligomeric matrix protein purified in a calcium-replete environment.
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42. (Amended) A composition comprising purified cartilage oligomeric matrix protein and a biological matrix, wherein the biological matrix comprises type I collagen gel or type II collagen gel, and wherein the matrix further comprises at least one material selected from the group consisting of: treated cartilage and bone matrices, collagens, hyaluronan, fibrin gels, carbon fibers and porous polylactic acid.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i - ii).